

plurality of rows on the disk with a first row of the plurality of rows beginning at a first location on the disk and ending at a second location on the disk which is between the first location and a center axis of the disk, such that the second location is on a first side of the center axis. Each of claims 8, 11 and 15 further require that a second row of the plurality of rows begin at a third location on the disk and end at a fourth location on the disk, such that the fourth location is on a second side of the center axis which is opposite to the first side.

The pending claims further include a second set of claims that include independent claims 19, 22 and 26 and set forth further unique features of the method of creating the index print on the disk or disk itself, and the relationship between the images on the disk and the disk. Further, each of independent claims 19, 22 and 26 require that the positive images be provided on the digital image storage disk so as to define a plurality of rows on the disk, and that at least two orthogonal planes extend along a center axis of the disk. As further required by each of claims 19, 22 and 26, a first row of the plurality of rows defines a first longitudinal axis that is perpendicular to one of the orthogonal planes, with the first row beginning and ending on one side of the one orthogonal plane. Each of claims 19, 22 and 26 further require that at least a second row of the plurality of rows defines a second longitudinal axis which is perpendicular to the one orthogonal plane, with the second row beginning on one side of the one orthogonal plane and ending on an opposite side of the one orthogonal plane.

The pending claims further include a third set of claims that include independent claims 30, 33 and 37 and set forth further unique features of the method of making an index print label for a digital image storage disk as well as digital image storage disk itself. These claims further set forth the relationship between the index print and the storage disk. Each of claims 30, 33 and 37 further require that the disk include positive images that correspond to the digital image data so that each of the positive images directly represent the photographic images stored on the digital image storage disk. Each of claims 30, 33 and 37 also require that at least two orthogonal planes be defined along a center axis of the disk, and that a first image of the positive images be located on a first side of one of the orthogonal planes. Each of claims 30, 33 and 37 further require that a second image of the positive images be provided on a second side of the orthogonal plane which is opposite to the first side.

The reference to Kahle was cited to show a method and apparatus for printing a disk label for a CD. Applicants note that the reference to Kahle discloses an arrangement wherein title information which identifies the digital information that is recorded on a medium is provided on the medium. The pending claims require that positive images which directly and/or visually

represent digitized photographic images stored on an image storage disk be provided on the surface of the disk. This feature is not shown or suggested in the reference to Kahle. As described in column 1 of Kahle, conventionally the labeling of CDs includes the manual writing of information on the label and attaching the label to the disk which tends to be time consuming. This discussion of the background of Kahle suggests that the reference to Kahle is not directed to the concept of directly and/or visually replicating on a label, in a manner which can be readable by a human, a photographic image which directly represents the digital photographic image information stored on the disk. The reference to Kahle is essentially directed to providing identifying information which can identify, in general, the subject matter of the information on the disk. As described in column 2 of Kahle, in at least one embodiment of the method of Kahle a title data stream is used to form title information. In a further embodiment of Kahle, a visual label having title information can be produced from a second data stream produced independently of a first data stream. Therefore, the problem addressed in Kahle with respect to manually writing information on the disk, and the solution as proposed by Kahle with regard to the creation of title information, does not contemplate or suggest that the information in Kahle is to be positive images which directly represent or replicate in a visual manner information which is stored in digital form on the disk.

The reference to Kraft et al. was cited to show the concept of an index print, however, the reference to Kraft et al. does not correct the deficiencies of Kahle with respect to the present invention. More specifically, the reference to Kraft et al. discloses a method of producing an index print to use for identifying images for reprints instead of utilizing a negative. There is no disclosure or suggestion in Kraft et al. that would suggest that the index print as disclosed by Kraft et al. can be applied to a CD or disk in the manner as claimed, such that the digital image information is provided on one surface of the CD or the disk, and the positive images which directly represent the digital information is provided on the second surface of the disk. Further, absent Applicants' disclosure, one having ordinary skill in the art would not have combined the above-noted references to achieve the claimed invention, since neither reference shows or suggests the specific method and apparatus of the claimed invention.

In essence, the reference to Kahle relates to the concept of providing a label on CD. The label may include title information that identifies the information recorded on the CD, the name of a particular database file recorded on the CD or a brief description of the type of information recorded on the CD. Each of the above categories describe the contents of the CD or disk in a general nature, and does not provide for the replication of the information that is

on the CD or disk in the manner in which the positive index images in accordance with the present invention provides a replication of the digital data image information stored on the disk. With respect to Kahle, title information relative to databases and descriptions could be the same for several CDs and is not of the nature where the information stored on the disk is replicated.

Kraft et al., as noted above, relates to a method of producing index prints. As described in Kraft et al., the index print can be a paper print that contains a plurality of small images that belong to different frames on a negative film, and can be used to identify a frame and order reprints. As noted above, there is no disclosure or suggestion in Kraft et al. that suggests that the index print as disclosed by Kraft et al. can be applied directly to the surface of a CD or disk in the manner as claimed; such that the positive images on the index print directly represent or replicate the digital information provided on the disk. That is, the reference to Kahle discloses the concept of providing a general label on a disk, while the reference to Kraft et al. relates to a basic index print that is provided on a separate sheet. If the teaching of Kraft et al. were applied to Kahle, the teaching would be that an index print representative of the CD can be created. However, absent Applicants' disclosure, one of ordinary skill in the art would not have provided for the specific feature of the present invention where positive images are applied to a surface of a CD or disk in the manner that the positive images directly represent the digital information provided on a second surface of the disk. Neither Kahle or Kraft et al. show or suggest this specific feature of the present invention.

Further, in the present invention since the positive images are to be provided on a CD or disk which has a unique shape, the present invention sets forth a layout of the positive images on the disk in a manner which permits a user to view the positive images while holding the disk, and also efficiently utilizes the space on the disk. For example, claim 8 requires that the positive images be provided on the disk so as to define a plurality of parallel rows, with at least a first row beginning at a first location on the disk and ending at a second location on the disk that is between the first location and a center axis of the disk, such that the second location is on a first side of the center axis; and at least a second row of the plurality of rows beginning at a third location on the disk and ending at a fourth location on the disk that is opposite to the third location, such that the fourth location is on a second side of the center axis which is opposite to the first side. The applied references are not believed to show or suggest the specific features of the positive images in combination with the digital image storage disk as required by the claimed invention and noted above.

In the paragraph bridging pages 2 and 3 of the Office Action, it is suggested that the layout of the positive images is printed matter. Applicants disagree for the following reasons. First, the claims are clearly directed to either a method of creating an index print label or a digital image storage disk. Each of the index print label and the digital image storage disk clearly refer to an article of manufacture. Moreover, in the present case, the positive images are provided on the digital image storage disk in a specific manner to (1) permit a viewing of the positive images while holding the disk; (2) permit a user to clearly identify what images are digitally stored on the disk; and (3) effectively use the surface area of the disk. Therefore, there is clearly a relationship between the positive images and the digital image disk upon which they are attached or placed. Further, the present invention with respect to the layout of the images on the disk provides for a faster and easier way to identify the images that are stored on the disk in the form digital image data. Therefore, with respect to the method and apparatus of the present invention, it is clear that the method of creating an index print label and the digital image storage disk itself having the specific positive images in the format as claimed provide for a useful, concrete and tangible result. Accordingly, it is believed that the specific features of the present invention with respect to the layout of the positive images should be considered and is clearly not shown, suggested or contemplated in the applied references. It is clear that the claims are directed to the combination of the index print having positive images thereon and a digital image storage disk, with the positive images being provided on the disk in a manner that facilitates the viewing of the images, and the positive images directly representing the digital information on the disk. Therefore, the features as required by the claimed invention with respect to the positioning of the images on the disk are patentable features which are not shown, suggested or contemplated in the applied references.

As an example, in In re Gulack, 703F. F2d 1381 (Fed. Cir. 1983), it was held that the difference between an invention and the prior art cited against it cannot be ignored because those differences reside in the content of the printed matter. In Gulack, the invention consisted of (1) a band, a ring, or set of concentric rings; (2) a plurality of individual digits imprinted on the band or ring at regularly spaced intervals; and (3) an algorithm by which the appropriate digits are developed. Id at 1387. The prior rejection in Gulack was premised upon the fact that a circular band with items printed upon it was well known in the art. See Id at 1384. In Gulack the Court concluded that the numbers printed on the band should be considered since they had a functional relationship to the band itself, and that the digits exploit the endless nature of the band. See Id at 1386-87. In the present invention, the positive images and the specific manner in which the

positive images are provided on the disk achieve the purpose of permitting a person to immediately identify what images are stored on the disk while holding the disk. Also, the specific layout of the images on the disk as claimed exploit the physical nature of the disk, and the provision of the positive images on the disk overcome the stated problem of index prints being separated from the medium which includes the images. Therefore, consistent with the finding in Gulack, in the present invention a relationship exists between the positive images and the disk, and further, the differences between the pending claims and the proposed combination of references is such that the applied references, whether considered individually or in combination, do not show or suggest positive images on a disk in the specific manner required by the claimed invention.

Accordingly, claims 8, 11, 15, 19, 22, 26, 30, 33 and 37 are believed be allowable over the references to Kahle and Kraft et al., whether these references are considered individually or in combination.

Claims 9-10 depend from claim 8 and set forth further unique features of the present invention which are also not believed to be shown or suggested in the applied references. Each of claims 9 and 10 further set forth additional features of the positive images with respect to providing them on the digital image storage disk. Each of claims 9 and 10 set forth that the digital image storage disk includes indicia that is provided on a second portion of the second surface of the disk. Thus, claims 9 and 10 set forth the combination of indicia and positive images which is not shown or suggested in the applied references. Claims 12-13 are similar to claims 8 and 9 with respect to the combination of indicia and positive images. Therefore, claims 9-10 and 12-13 also believed to be allowable.

Claims 16-18 depend from claim 15; claims 20-21 depend from claim 19; claims 23-25 depend from claim 22; claims 27-29 depend from claim 26; claims 31-32 depend from claim 30; claims 34-36 depend from claim 33; and claims 38-40 depend from claim 37. Each of the above-noted dependent claims set forth further unique features of the present invention which are also not believed to be shown or suggested in the applied references. Accordingly, these claims are also believed to be allowable.

Therefore, the references to Kahle and Kraft et al., whether considered individually or in combination, are not believed to anticipate or make obvious the specific features required by claims 8-40.

Referring to the rejection of claims 8-40 under 35 USC 103(a) as being unpatentable over Otake et al, Ishikawa et al. and Wess, the above references, whether considered individually or in combination, are not believed to anticipate or make obvious the specific features required by claims 8-40. As

noted above, the claimed invention provides for an index print with viewable positive images on one surface of a storage disk or a photo CD that permits a person to view or read the positive images while holding the disk or CD. These positive images are provided in specific layouts on the disk and represent the photographic images stored on a second opposing surface of the CD or disk in the form of digital image data.

A feature of the present invention relates to the ability of a person to easily and quickly pick up a storage disk or photo CD and at a glance know what images are stored on the photo CD or disk. This is particularly useful in the area of photo CDs or storage disks where the images are stored as digital image data and not readily readable or viewable by a human. Further, with the specific structure and method of the present invention, the index print is provided on the storage disk or CD. This overcomes problem with prior techniques in which the index print is provided on a separate card or case which holds the CD or disk and can become separated from the CD or disk. In a still further feature of the present invention, given the nature of photo CDs and storage disks, a user can quickly glance at the index print on the photo CD or disk, determine quickly that it is the disk or CD that he or she wishes to use, and quickly insert the disk into a computer to view the images which correspond to the positive images on the index print.

The reference to Otake et al. shows a basic index sheet and the provision of the index sheet on a separate case. Otake et al. differs from the claimed invention in that the index sheet is provided separately from the image-recording medium.

The reference to Ishikawa et al. was cited show the concept of applying an index print either by printing directly on an item or by affixing an adhesive label with an index print thereon. However, the reference to Ishikawa et al. has the same drawbacks as Otake et al., since the reference to Ishikawa et al. discloses the concept of providing an index print on a medium that is not the medium that carries the images. More specifically, Ishikawa et al. discloses the concept of providing an index print on a film cartridge. This is different from the claimed invention in which the index print is provided on the same medium where the images are stored. In the arrangements of Otake et al. and Ishikawa et al., the casing or cartridge having the index print thereon can be separated from the disk or film which includes the images. Further, the reference to Ishikawa et al. does not disclose or suggest the claimed method and apparatus which include the structure of the disk or CD with a first surface having the digital image data, and a second surface that opposes the first surface having the index print (with images that directly represent or replicate the images stored on the disk or CD), in a

manner in which the images on the index print can be viewable by human while holding the disk or CD. Therefore, modifying the reference to Otake et al. with the teaching of Ishikawa et al. would not provide for the claimed invention, since the teaching of Ishikawa et al. is similar to Otake et al. in the sense that the positive images are provided on an element that is not the element that carries the images.

The reference to Wess was cited to show the concept of providing an index print on an image-recording medium. In Wess, an index print is provided on the end of a developed roll of film, such that the developed roll of film along with the index print can be rolled back into a cassette. It is noted that the cassette of Wess is of the type having a door 119 that can be rotated from a closed position to an open position by inserting a drive member into a keyway 117. Therefore, in the reference to Wess, the film having the index print thereon is intended to be kept within the cassette and can be pulled from the cassette by utilizing a special drive-member type tool.

Regarding the reference to Wess referring to Otake et al. (column 1, lines 18-54), Applicants note that the specific mention of Otake et al. in the reference to Wess refers to Fig. 11 of Otake et al. which illustrates a container for an index sheet together with photographic film and printed photographs. Therefore, in considering the reference to Otake et al. and the reference to Wess, the teaching would be to provide the end of negative 108 (Fig. 11) of Otake et al. with an index print in the manner as taught by Wess. Absent Applicants' disclosure, there would have been no teaching or suggestion of providing a photo CD or disk with an index sheet having the positive images provided in the layouts specifically required by the claimed invention.

More specifically, the reference to Otake et al. discloses providing an index sheet on an element that is separate from the media that carries the image data. The reference to Ishikawa et al. parallels Otake et al. in that it also teaches the concept of providing the index sheet on an element (a cartridge) that is different from the media which contains the images. The reference to Wess which was cited to show the concept of an index sheet on an image-carrying medium does not provide for the specific method and structure of the claimed invention. In Wess the index sheet does not include the claimed layouts of positive images and the index sheet in Wess is provided on a film which is placed in an enclosed cassette. If the teachings of Wess in accordance with the reference in Wess to Otake et al. were applied to Otake et al., the teaching would be to provide the end of the negative of Fig. 11 of Otake et al. with an index print as specifically described by Wess. Absent Applicants' disclosure, there would be no teaching, suggestion or motivation to provide a first surface of a disk or CD with

digital image data, and a second opposing surface of the disk or CD with an index print with images in a specific layout that effectively uses the surface of the disk; such that the positive images exactly represent and replicate the content of the digital image data and are viewable while holding the CD or disk. Applicant notes that in conventional labels on a CD, the label only includes a title or broadly describes what is stored on the CD. There is no reference that shows the claimed disk with digital image data on one side and positive images (in a specific layout) that exactly represent the digital image data on the opposing side of the disk, wherein the positive images are mounted in a manner that permits a user to pick up the disk and easily see exactly what images are stored on the disk.

Further, the reference to Wess shows an index sheet on the end of the film and on the same side as the exposed images when the film is removed from the cassette. Therefore, the reference to Wess does not show a first surface with digital image data and a second surface opposing the first surface with the index sheet. Additionally, it would not have been obvious to provide the index sheet in Wess on the opposing second surface of the film since there is no teaching or motivation in Wess for such an arrangement, and the provision of the index sheet of Wess on an opposing surface of the film would obscure the exposed images on the negative.

With the arrangement of Wess, the support sheet for the index print is designed to be extremely thin so that the film strip can be wound back into the cartridge without interference. In the arrangement of Wess, these types of cartridges are generally made to communicate with a photofinisher and are such that improper operation of the cartridge door can effect the nature or state of the cassette setting. Further, a plurality of cassettes such as disclosed in Wess where the index sheet is provided on a film that is inserted in the cartridge would make it difficult to identify one cartridge from another without having to remove the film from the cassette.

Also, as noted above, the pending claims include limitations with regard to the layout of the positive images on the disk in a manner which achieves an effective utilization of the space on the disk, as well as permits a user to hold the disk and view the positive images representative of the digital image data on the disk. In the Office Action, it is suggested that the specific layouts are merely related to printed matter. As noted above, Applicants disagree since the claims are specifically directed to either a method of creating an index print for a digital image storage disk or the digital storage disk having an index print thereon. Therefore, the combination of the index print and the disk are both articles of manufacture and there is a clear relationship between the index print, the images on the index print and the digital image data that is stored on the disk.

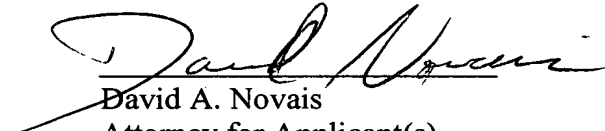


Furthermore, by providing the layout of the positive images in the manner as required by each of the claims and discussed above, it is possible to effectively use the space on the disk and further provide for a faster and easier way to identify the digital images that are stored on a disk by viewing the index print images. Therefore, it is clear that both the method of creating the index print for a storage disk having the image layouts as noted in the claims, as well as the digital image disk itself provide for a useful, concrete and tangible result. This result in a disk with a specific layout of positive images that utilizes the space on the disk in an efficient manner to provide for an easy way to identify digital images on the disk. Further, it clear that there is a relationship between the positive images on the disk and the disk itself, and that this relationship distinguishes the claimed invention from the applied references. That is, the specific provision of the location of the positive images with regard to parallel rows, the center of the disk and orthogonal planes relative to the disk are not believed to be shown or suggested in any of the applied references.

Accordingly, the references to Otake et al., Ishikawa et al. and Wess, whether considered individually or in combination, are not believed to show or suggest the features of claims 8-40.

In view of the foregoing comments, it is submitted that the inventions defined by each of claims 8-40 are patentable, and a favorable reconsideration of this application is therefore requested.

Respectfully submitted,

  
David A. Novais  
Attorney for Applicant(s)  
Registration No. 33,324

DAN/ld  
Rochester, NY 14650  
Telephone: 585-588-2727  
Facsimile: 585-477-1148

If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.